

5'	GCG	TGG	GAT	ACC	CGT	ACC	ACA	GAA	ATG	CAG	GGA	CCA	TTG	CTT	CCA	GGC	CTTC
	9	18			27					36				45			54
	63	72			81					90				99			108
TGC	TTT	CTG	CTG	AGC	CTC	TTT	GGA	GCT	GTG	ACT	CAG	AAA	ACC	AAC	ACT	TCC	TGT
C	F	L	L	S	L	F	G	A	V	T	Q	K	T	K	T	S	C
GCT	AAG	TGC	CCC	CCA	AAT	GCT	TCC	TGT	GTC	AAT	AAC	ACT	CAC	TGC	ACC	TGC	TGT
A	K	C	P	P	N	A	S	C	V	N	N	T	H	C	T	C	N
CAT	GGA	TAT	ACT	TCT	GGA	TCT	GGG	CAG	AAA	CTA	TTC	ACA	TTC	CCC	TTG	GAG	ACA
H	G	Y	T	S	G	S	G	Q	K	L	F	T	F	P	L	E	T
TGT	AAC	GAC	ATT	AAT	GAA	TGT	ACA	CCA	CCC	TAT	AGT	GTA	TAT	TGT	GGA	TTT	AAC
C	N	D	I	N	E	C	T	P	P	Y	S	V	Y	C	G	F	N
GCT	GTA	TGT	TAC	AAT	GTC	288			297			306			315		324
A	V	C	Y	N	V		E	G	S	F	Y	C	Q	C	V	P	Y
AGA	CTG	CAT	TCT	GGG	AAT	GAA	CAA	TTC	AGT	AAT	TCC	AAT	GAG	AAC	ACC	TGT	CAG
R	L	H	S	G	N	E	Q	F	S	N	S	N	E	N	T	C	Q

FIGURE 1A

387	GAC	ACC	TCC	TCA	AAG	ACA	ACC	CAG	GGC	AGG	AAA	GAG	CTG	CAA	AAG	ATT	GTG	432
D	T	T	S	S	K	T	T	Q	G	R	K	E	L	Q	K	I	V	
441	GAC	AAA	TTT	GAG	TCA	CTT	CTC	ACC	AAT	CAG	ACT	TTA	TGG	AGA	ACA	GAA	GGG	AGA
D	K	F	E	S	L	L	T	N	Q	T	L	W	R	T	E	G	R	
495	CAA	GAA	ATC	TCA	TCC	ACA	GCT	ACC	ACT	ATT	CTC	CGG	GAT	GTG	GAA	TCG	AAA	GTT
Q	E	I	S	S	T	A	T	T	I	L	R	D	V	E	S	K	V	
549	CTA	GAA	ACT	GCC	TTG	AAA	GAT	CCA	GAA	CAA	AAA	GTC	CTG	AAA	ATC	CAA	AAC	GAT
L	E	T	A	L	K	D	P	E	Q	K	V	L	K	I	Q	N	D	
603	AGT	GTA	GCT	ATT	GAA	ACT	CAA	GCG	ATT	ACA	GAC	AAT	TGC	TCT	GAA	AGA	AAG	648
S	V	A	I	E	T	Q	A	I	T	D	N	C	S	E	E	R	K	
657	ACA	TTC	AAC	TTG	AAC	GTC	CAA	ATG	AAC	TCA	ATG	GAC	ATC	CGT	TGC	AGT	GAC	ATC
T	F	N	L	N	V	Q	M	N	S	M	D	I	R	C	S	D	I	
711	ATC	CAG	GGA	GAC	ACA	CAA	GGT	CCC	AGT	GTC	ATT	GCC	TTT	ATC	TCA	TAT	TCT	TCT
I	Q	G	D	T	Q	G	P	S	V	I	A	F	I	S	Y	S	S	

FIGURE 1B

CTT	GGAAAC	ATC	ATA	AAT	GCA	ACT	TTT	TTT	GAA	GAG	ATG	GAT	AAG	AAA	GAT	CAA	810
L	G	N	I	I	A	T	F	F	E	E	M	D	K	K	D	Q	
GTG	TATCTG	AAC	TCT	CAG	GTT	GTG	AGT	GCT	ATT	GGA	CCC	AAA	AGG	AAC	GTG	864	
V	Y	L	N	S	Q	V	V	S	A	A	I	G	P	K	R	N	V
TCT	CTCTCC	AAG	TCT	GTG	ACG	CTG	ACT	TTC	CAG	CAC	GTG	AAG	ATG	ACC	CCC	AGT	918
S	L	S	K	S	V	T	L	T	F	Q	H	V	K	M	T	P	S
ACC	AAA	AAG	GTC	TTC	TGT	GTC	TAC	TGG	AAG	AGC	ACA	GGG	CAG	GGC	AGC	CAG	972
T	K	K	V	F	C	V	Y	W	K	S	T	G	Q	G	S	Q	W
TCC	AGG	GAT	GGC	TGC	TTC	CTG	ATA	CAC	GTG	AAC	AAG	AGT	CAC	ACC	ATG	TGT	1026
S	R	D	G	C	F	L	I	H	V	N	K	S	H	T	M	C	N
TGC	AGT	CAC	CTG	TCC	AGC	TTC	GCT	GTC	CTG	ATG	GCC	CTG	ACC	AGC	CAG	GAG	1080
C	S	H	L	S	S	F	A	V	L	M	A	L	T	S	Q	E	C
GAT	CCC	GTG	CTG	ACT	GTC	ATC	ACC	TAC	GTG	GGG	CTG	AGC	GTC	TCT	CTG	CTG	1134
D	P	V	L	T	V	I	T	Y	V	G	L	S	V	S	L	C	1125

FIGURE 1C

1143	CTC	CTC	CTG	GGC	GGC	CTC	ACT	TTT	CTC	CTG	TGT	AAA	GCC	ATC	CAG	AAC	ACC	AGC	1188
L	L	A	A	L	A	T	F	L	L	C	K	A	I	Q	N	T	S		
1197	ACC	TCA	CTG	CAT	CTG	CAG	CTG	CTC	TCG	TGC	CTC	TTC	CTG	GCC	CAC	CTC	CTC	TTC	1242
T	S	L	H	L	Q	L	S	L	C	L	F	L	A	H	L	L	F		
1251	CTC	GTG	GGG	ATT	GAT	CGA	ACT	GAA	CCC	AAG	GTG	CTG	TGC	TCC	ATC	ATC	GCC	GGT	1296
L	V	G	I	D	R	T	E	P	K	V	L	C	S	I	I	I	A	G	
1305	GCT	TTG	CAC	TAT	CTC	TAC	CTG	GCC	GCC	TTC	ACC	TGG	ATG	CTG	CTG	GAG	GGT	GTG	1350
A	L	H	Y	L	Y	L	Y	L	A	A	F	T	W	M	L	L	E	G	V
1359	CAC	CTC	TTC	CTC	ACT	GCA	CGG	AAC	CTG	ACA	GTG	GTC	AAC	TAC	TCA	AGC	ATC	AAT	1404
H	L	F	L	T	A	R	N	L	T	V	V	N	Y	S	S	S	I	N	
1413	AGA	CTC	ATG	AAG	TGG	ATC	ATG	TTC	CCA	GTC	GGC	TAT	GGC	GTT	CCC	GCT	GTG	ACT	1458
R	L	M	K	W	I	M	F	P	V	G	Y	G	V	P	A	V	T		
1467	GTG	GCC	ATT	TCT	GCA	GCC	TCC	TGG	CCT	CAC	CTT	TAT	GGA	ACT	GCT	GAT	CGA	TGC	1512
V	A	I	S	A	A	S	W	P	H	L	Y	G	T	A	D	R	C		

FIGURE 1D

1521	TGG	CTC	CAC	CTG	GAC	CAG	GGA	TTC	ATG	TGG	AGT	TTC	CTT	GGC	CCA	GTC	TGT	GCC
W	L	H	L	D	Q	G	F	M	W	S	F	L	G	P	V	C	A	
1575	ATT	TTC	TCT	GCG	AAT	TTA	GTA	TTG	TTT	ATC	TTG	GTC	TTT	TGG	ATT	TTG	AAA	AGA
I	F	S	A	N	L	V	L	F	I	L	V	F	W	I	L	K	R	
1629	AAA	CTT	TCC	TCC	CTC	AAT	AGT	GAA	GAA	GTG	TCA	ACC	ATC	CAG	AAC	ACA	AGG	ATG
K	L	S	S	L	N	S	E	V	S	T	T	I	Q	N	T	R	M	L
1683	GCT	TTC	AAA	GCA	ACA	GCT	CAG	CTC	TTC	ATC	CTG	GGC	TGC	ACA	TGG	TGT	CTG	GGC
A	F	K	A	T	A	Q	L	F	I	L	G	C	T	W	C	L	G	
1737	TTC	CTA	CAG	GTG	GGT	CCA	GCT	GCC	CAG	GTC	ATG	GCC	TAC	CTC	TTC	ACC	ATC	ATC
L	L	Q	V	G	P	A	A	Q	V	M	A	Y	L	F	T	I	I	
1791	TTC	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746
N	S	L	Q	G	F	F	I	F	L	V	Y	C	L	L	S	Q	Q	
1845	AAC	AGC	CTC	CAA	GGC	TTC	TTC	ATC	TTC	TTG	GTC	TAC	TGC	CTC	CTC	AGC	CAG	CAG
V	Q	K	Q	Y	Q	K	W	F	R	E	I	V	K	S	K	S	E	
1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854	1854
1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872	1872
1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881
1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890	1890

FIGURE 1E

1899 1908 1917 1926 1935 1944
TCT GAG ACA TAC ACA CCT TCC AGC AAG ATG GGT CCT GAC TCA AAA CCC AGT GAG
S E T Y T L S S K M G P D S K P S E

1953 1962 1971 1980 1989 1998
GGG GAT GTT TTT CCA GGA CAA GTG AAG AGA AAA TAT TAA AAC TAG AAT ATT CAA
G D V F P G Q V K R K Y

2007 2016 2025 2034 2043 2052
CTC CAT ATG GAA AAT CAT ATC CAT GGA TCT CTT TGG CAT TAT GAA GAA TGA AGC

2061 2070 2079 2088 2097 2106
TAA GGA AAA GGG AAT TCA TTA AAC ATA TCA TCC TCC TTG GAG AGG AAG TAA TCA ACC

2115 2124 2133 2142 2151 2160
TTT ACT TCC CAA ACT GTT TGT TCT CCA CAA TAG GCT CTC AAC AAA TGT GTG GTA

2169 2178 2187 2196 2205 2214
AAT TGC ATT TCT CTC CAC TAT GGT GTA TTC AGT CAA TGC TTG TCC CTG GAA ACC

2223 2232 2241 2250 2259 2268
CAA AGC ATG ACC ACT GCA AAT ATT TCC TTG ACT TTT TGT AAA TGA AGA GGT CCT

2277 2286 2295 2304 2313 2322
TTT CCT CAA GTT CTT AGT CCC ACT CAT CCT AAA CTT GCT CTT TTT TTA AGA CAG

2331 2340 2349 2358 2367 2376
AGT TTC ACT CTG TCA CCC AGG CTG GAG TGT AGT GGC ATG ATC GTA GCT CAC TGC

FIGURE 1F

AGC	CTC	AAA	CTC	CAG	AGC	TCA	ACT	GGT	TCT	CCA	GCC	TCA	GCT	TCC	CAA	AGT	GCT
2385	2394			2403				2412					2421				2430
2439		2448		2457			2466					2475				2484	
GGG	ATT	ACA	GGC	ATG	AGC	CAC	TGC	ACC	TGG	CCA	TAA	ACT	TGC	TCT	TTA	AAC	TCA
2493		2502		2511			2520					2529				2538	
CTC	ATT	CCC	TCA	AAC	CAT	CAG	CTT	CCT	ACT	GGC	TTT	ACT	TCC	TTG	CTA	GAT	ACA
2547		2556		2565			2574					2583				2592	
GGC	TAA	TTT	TTT	TTT	TTT	TTT	TTT	TTT	TTT	GAG	ATG	GAG	TCT	CGC	TCT	TGT	
2601		2610		2619			2628					2637				2646	
TGC	CCA	GGC	TGG	AGT	GCA	ACG	GGG	TGA	GTG	CAA	CCT	CTG	CCT	CCC	GGG	TTC	AAG
2655		2664		2673			2682					2691				2700	
CGA	TTC	TTC	TGC	CTC	AGC	CTC	CCA	AGT	AGC	TGG	CGT	TAC	AGG	TAT	GGA	CCA	CCA
2709		2718		2727			2736					2745				2754	
TGT	CCG	GCT	AAT	TTT	GTA	TTT	TTA	GTA	GAG	ACA	GGG	TTT	CTC	CAT	GTT	GGT	CAG
2763		2772		2781			2790					2799				2808	
GCT	GGT	CTC	GAA	CTC	CCA	GCC	TCA	GGT	GAT	CCA	CCT	GAC	TTG	GCC	TCC	CAA	GAG
2817		2826		2835			2844					2853				2862	
TGC	TGG	GAT	TAC	AGG	CAT	GAG	CCA	CCG	TGC	CCA	GCC	CAG	GCT	AAC	TTA	TTT	TCT

FIGURE 1G

2871	2880	2889	2898	2907	2916
TCT GAG ACT GAG TCT CAC TAC TGT CAC CCA GGC TGG AGT GCA GTG GTG AGA TCT					
2925	2934	2943	2952	2961	2970
AGG CTC ACT GCA ACC TCT ACC TCC TGG GTT CAA GCA ATT CTC CTG CCT TAG CCT					
2979	2988	2997	3006	3015	3024
CCC GAT AGC TGG GAC TAC AAG CAC ATG CCG CCA TGC CCA GCT AAT TTT GTA TTT					
3033	3042	3051	3060	3069	3078
TTA GTG GAG ACA AGG TTT CAC CAT GTT GGC CAG GCT GAT CTC AAA CTC CTG ACC					
3087	3096	3105	3114	3123	3132
TCA AGC AGC GAT CCA CCT GCC GGG GCC TCC CAA AGT GCT GGG ATT ACA GAC ACA					
3141	3150	3159	3168	3177	3186
AGC CAT CGC GCC TGA TGA GAG ATT TTA AGT GTT CTC ACC ACA AAA AAA AAG AAA					
3195	3204	3213	3222	3231	3240
AAA AAG TTA TAT GAG GTA ATC GTA TAT TAA TTA GCT TGA CTT AGT CAT TCC ACG					
3249	3258	3267	3276	3285	3294
ATG TAG ATA TAT TTC AAA ACA TCC TGT TGT ACA TGA TAA ATA TAT ATA TTT TNG					
3303	3312	3321	3330	3339	3348
TCT ATA TAA AAC AAA TAA ATA AAT AAA TGT TTA AAG TGT AAA AAA AAA AAA AAA					

AG 3 -

FIGURE 1H

1	M Q G -	P L L L P G L C F I L S L F G A V T Q K T K T S -	429905
1	M R G F N L	P L L L F W G C C V M H S W E G H I R P T R K P N T	GI 784994
1	- - - - -	- - - - -	GI 2935597
28	- - - C A K -	C P P N A S C -	429905
31	K G N N C R D S T L	C P A Y A T C T N T V D S Y Y C T C K Q	GI 784994
1	- - - - -	- - - - -	GI 2935597
48	G Y T S G S G Q K L F T P L E T C N D I N E C T P P -	- - -	429905
61	G F L S S N G Q N H F K D P G V R C R D I D E C S Q S P Q P	-	GI 784994
1	- - - - -	- - - - -	GI 2935597
75	- - - - -	- Y S V Y C -	429905
91	C G P N S S C K N L S G R Y K C S C L D G F S S P T G N D W	-	GI 784994
1	- - - - -	- - - - -	GI 2935597
82	- - - - -	- - - - -	429905
121	V P G K P G N F S C T D I N E C L T S R V C P E H S D C V N	-	GI 784994
1	- - - - -	- - - - -	GI 2935597
88	V E G S F Y C Q C V P G Y R L H S G N E Q F S N -	- - -	429905
151	S M G S Y S C S C Q V G F I S R N S T C E D V N E C A D P R	-	GI 784994
1	- - - - -	- - - - -	GI 2935597

FIGURE 2A

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FIGURE 2B

127	-	-	-	Q G R K E	-	-	L Q K I V D K F E S L L T N Q T L W	429905																								
361	D	K	V	C	E	N	K	T	T	V	V	S	L	K	N	T	T	E	S	F	V	P	V	L	K	Q	I	S	M	W	GI	784994
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GI	2935597	
150	R	T	E	G	R	Q	E	I	S	S	T	A	T	T	I	L	R	D	V	E	S	K	V	L	E	T	A	L	K	D	429905	
391	T	K	F	T	K	E	E	T	T	S	S	L	A	T	V	F	L	E	S	V	S	M	T	L	A	S	F	W	K	P	GI	784994
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GI	2935597	
180	P	E	Q	K	V	L	K	I	Q	N	D	S	V	A	I	E	T	Q	A	I	T	D	N	C	S	E	R	K	T	429905		
421	S	A	N	V	T	P	A	V	R	A	E	Y	L	D	I	E	S	K	V	I	N	K	E	C	S	E	E	N	V	T	GI	784994
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GI	2935597	
210	F	N	L	N	V	Q	M	N	S	M	D	I	R	C	S	D	I	I	O	G	D	T	O	G	P	S	V	I	A	F	429905	
451	L	D	L	V	A	K	G	D	K	M	K	I	G	C	S	T	I	E	E	S	S	T	E	T	T	G	V	A	F	GI	784994	
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GI	2935597	
240	I	S	Y	S	S	L	G	N	I	I	N	A	T	F	F	E	E	M	D	-	-	-	-	-	K	K	D	Q	V	Y	429905	
481	V	S	F	V	G	M	E	S	V	L	N	E	R	F	F	Q	D	H	Q	A	P	L	T	T	S	E	I	K	L	K	GI	784994
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GI	2935597	
265	L	N	S	Q	V	V	S	A	A	I	G	P	K	R	N	V	S	L	S	K	S	V	T	L	T	F	Q	H	V	K	429905	
511	M	N	S	R	V	V	G	G	I	M	T	G	E	K	K	D	G	F	S	D	P	I	I	Y	T	L	E	N	V	Q	GI	784994
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GI	2935597	

FIGURE 2C

295	M T P S T K K V F C V Y W K S T G Q G S Q -	W S R D G G C F L	429905
541	P K Q K F E R P I C V S W S T D V K G G R -	W T S F G C V I	GI 784994
1	- - - - - K V L C V F W E H G Q N G C G H W A T T G C S T	GI 2935597	
324	I H V N K S H T M C N C S H L S S F A V I M A L T S Q E E D	429905	
570	L E A S E T Y T I C S C N Q M A N L A V I M A S G E L T M D	GI 784994	
25	I G T R D T S T I C R C T H L S S F A V I M A H Y D V Q E D	GI 2935597	
354	P V L T V I T Y V G L S V S L L C L L L A A L T F L L C K A	429905	
600	F S L Y I I S H V G I I I S L V C L V L A I A T F L L C R S	GI 784994	
55	P V L T V I T Y M G L S V S L L C L L L A A L T F L L C K A	GI 2935597	
384	I Q N T S T S L H L Q L S L C L F L A H L L F L V G I D R T	429905	
630	I R N H N T Y L H L Q L S L C L F L A K T L F L A G I H K T	GI 784994	
85	I Q N T S T S L H L Q L S L C L F L A H L L F L V A I D Q T	GI 2935597	
414	E P K V L C S I I A G A L H Y L Y L A A F T W M L L E G V H	429905	
660	D N K T G C A I I A G F I H Y L F L A C F E W M L V E A V I	GI 784994	
115	G H K V L C S I I A G T I L H Y L Y L A T F T W M L L E A L Y	GI 2935597	
444	L F L T A R N L T V V N Y S S I N R L M K W I M F P V G Y G	429905	
690	L F L M V R N L K V V N Y E S S R N I K M L H I C A F G Y G	GI 784994	
145	L F L T A R N L T V V N Y S S I N R F M K L M F P V G Y G	GI 2935597	

FIGURE 2D

474	V P A V T V A I S A A S W P H L Y G T A D R C W L H L D Q G	429905
720	L P M L V V V I S A S V Q P Q G Y G M H N R C W L N T E T G	GI 784994
175	V P A V T V A I S A A S R P H L Y G T P S R C W L Q P E K G	GI 2935597
504	F M W S F L G P V C A I F S A N L V L F I L V F W I L K R K	429905
750	F I W S F L G P V C T V I V I N S L L L T W T L W I L R Q R	GI 784994
205	F I W G F L G P V C A I F S V N L V L F L V T L W I L K N R	GI 2935597
534	L S S L N S E V S T I Q N T R M L A F K A T A Q L F I L G C	429905
780	L S S V N A E V S T L K D T R L L T F K A F A Q L F I L G C	GI 784994
235	L S S L N S E V S T L R N T R M L A F K A T A Q L F I L G C	GI 2935597
564	T W C L G L L Q V G P A A Q V M A Y L F T I I N S L Q G F F	429905
810	S W V L G I F Q T G P V A G V M A Y L F T I I N S L Q G A F	GI 784994
265	T W C L G I L Q V G P A A R V M A Y L F T I I N S L Q G V F	GI 2935597
594	I F L V Y C L L S Q Q V Q K Q Y Q K W F R E I V K S K S E S	429905
840	I F L I H C L L N G Q V R E E Y K R W I T G K T K P S S Q S	GI 784994
295	I F L V Y C L L S Q Q V R E Q Y G K W S K G I R K L K T E S	GI 2935597
624	E T Y - T L S S K M G P D S K P S E G D V F P G Q V K R K Y	429905
870	Q T S R I L S S M P S A S K T G	GI 784994
325	E M H T L S S A K A D T S K P S T V N	GI 2935597

FIGURE 2E

Figure 3

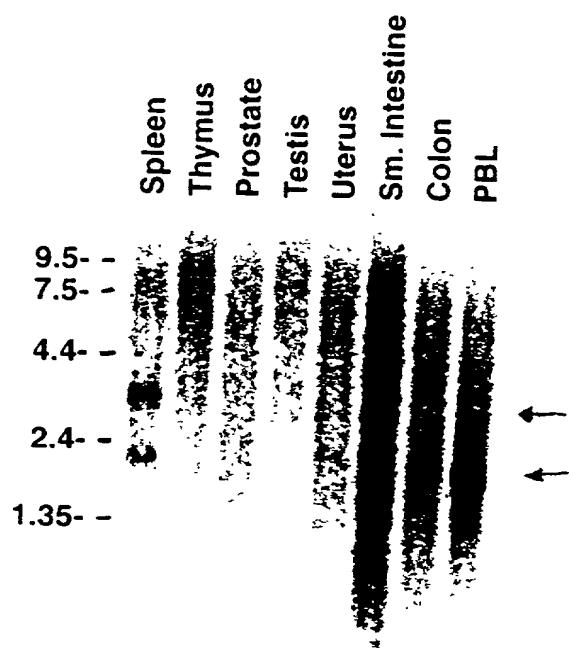


Figure 4

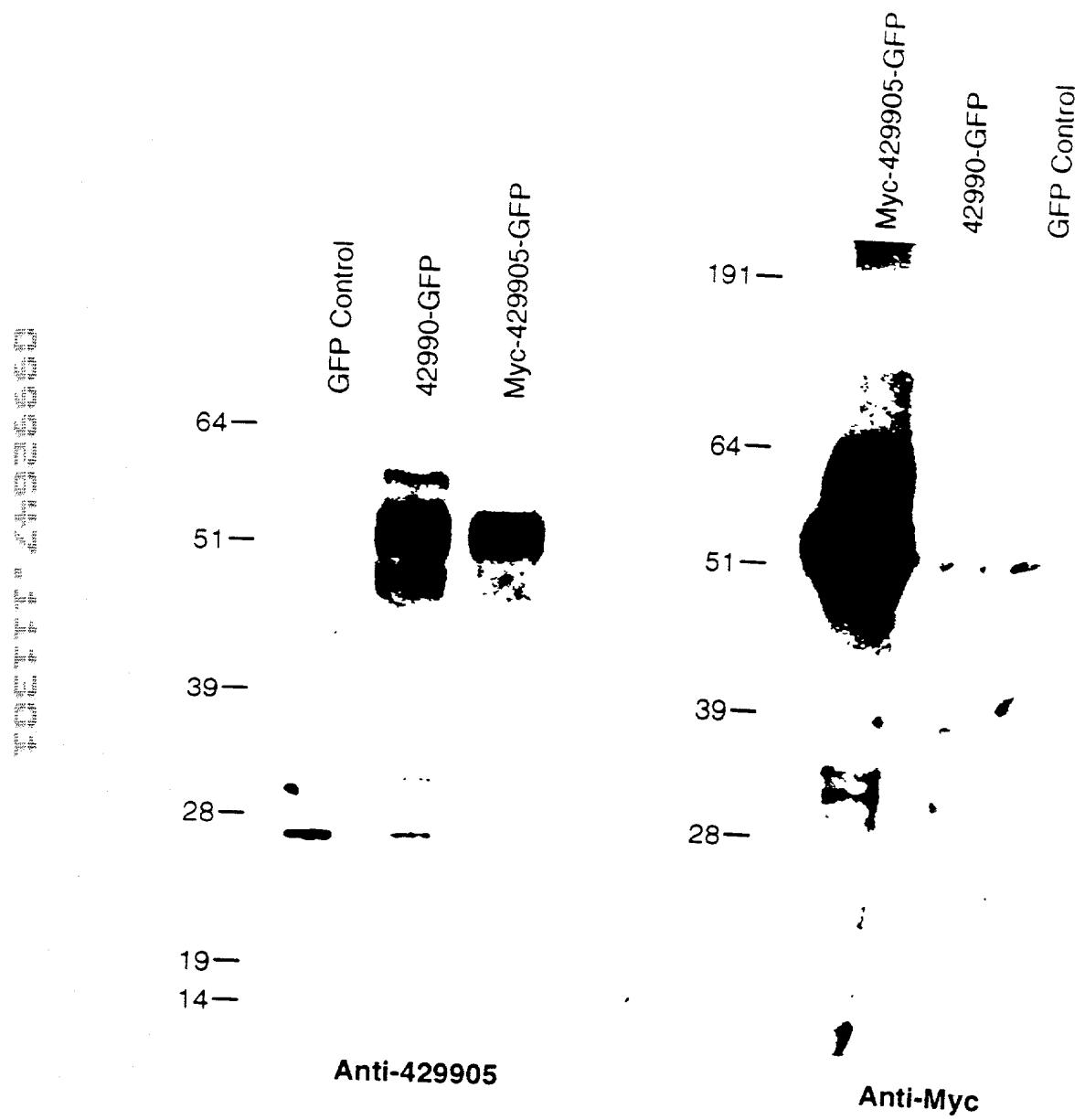


Figure 5

